

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION

(PCT Article 36 and Rule 70)

REC'D 14 SEP 2004

REPORT PCT

Applicant's or agent's file reference 109087	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).	
International Application No. <b>PCT/AU2003/001099</b>	International Filing Date (day/month/year) 26 August 2003	Priority Date (day/month/year) 4 September 2002
International Patent Classification (IPC) or national classification and IPC Int. Cl. <sup>7</sup> C10B 53/00, C02F 11/10		
Applicant ENVIRONMENTAL SOLUTIONS INTERNATIONAL LTD et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 8 sheet(s).

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 11 February 2004	Date of completion of the report 26 August 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  <b>ASOKA DIAS-ABEYGUNAWARDENA</b> Telephone No. (02) 6283 2141

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# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/AU2003/001099

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed.
- ☒ the description, pages 1-6, 9-14, 16-24, as originally filed,  
pages , filed with the demand,  
pages 7, 8/1, 8/2, 15, received on 10 August 2004 with the letter of 10 August 2004
- ☒ the claims, pages , as originally filed,  
pages , as amended (together with any statement) under Article 19,  
pages , filed with the demand,  
pages 26, 27, 28 , received on 10 August 2004 with the letter of 10 August 2004  
pages 25 received on 26 August 2004 with the letter of 26 August 2004
- ☒ the drawings, pages 1/8-8/8, as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of
- ☐ the sequence listing part of the description:  
pages , as originally filed  
pages , filed with the demand  
pages , received on with the letter of

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU2003/001099

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims 1-27	YES
	Claims	NO
Inventive step (IS)	Claims 1-27	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-27	YES
	Claims	NO

**2. Citations and explanations (Rule 70.7)****NOVELTY(N)**

Claims 1-27

WO 2000/56671

US 5865956

US 4781796

None of the above citations disclose a process/apparatus for the conversion of sludges and carbonaceous materials, characterised in that the process comprises the steps of : (a) heating the material to be converted whilst being conveyed through a heating zone of a reactor in the absence of oxygen for the volatilisation of oil producing vapour product and a solid residue or char; (b) contacting the vapour product and char whilst conveying that char through a reaction zone of the reactor at a determined "weight hour space velocity" so as to promote vapour-phase catalytic reactions; and (c) removing and separating the gaseous products and char from the reactor, wherein the material and the resulting char are conveyed by way of a non-positive conveyor, and less than 5% of the material to be converted is passed from the reactor in a time less than that required to heat it to a temperature of more than about 400 C.

**INVENTIVE STEP(IS)**

Claims 1-27 : As above :